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Cash Flow Trends and Their Fundamental Drivers: Comprehensive Review (Qtr 1, 2010)

FREE CASH MARGIN INDEX:

2.43	6.69	5.14
Recession Low (Mar. 2001)	Current (Mar. 2010)	Previous Expansion High (June, 2004)

For the twelve months ending with the first quarter of 2010, overall free cash margin for all non-financial firms surveyed continued its climb, reaching a new high point of 6.69%, the highest we have seen the measure since we began tracking it in March 2000. Although the increase in free cash margin has slowed of late, the metric still increased during the latest reporting period. Capital expenditures as a % of revenue remained essentially flat from the fourth quarter of 2009, which was a large driver behind previous increases in free cash margin. An increase in operating cushion, or operating profit before depreciation and amortization pushed free cash margin higher in the first quarter period, driven by an increase in gross margin and a reduction in SG&A as a percent of revenue. This is a testament to managers' ability to control costs. We will continue to monitor the process in future reports to see if companies can maintain the current high level of free cash margin, especially as ramp up capital spending with an improving economy.

During the current reporting period, six industry sectors reported improved free cash margin from the same period in 2009, while only one sector saw free cash margin decline. Thirteen sectors saw their free cash margin remain relatively stable. Individual companies with interesting free cash margin trends that are examined in this report are Intel Corp. (INTC), Advanced Micro Devices (AMD), Sirius XM Radio Inc. (SIRI), AT&T Inc. (T), and Verizon Communications Inc. (VZ).

Data for this research were provided by Cash Flow Analytics, LLC., www.cashflowanalytics.com. Charles Mulford is a principal in Cash Flow Analytics, LLC. June, 2010

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Georgia Tech Financial Analysis Lab

The Georgia Tech Financial Analysis Lab conducts research on issues of financial reporting and analysis. Unbiased information is vital to effective investment decision-making. Accordingly, we think that independent research organizations, such as our own, have an important role to play in providing information to market participants.

Because our Lab is housed within a university, all of our research reports have an educational quality, as they are designed to impart knowledge and understanding to those who read them. Our focus is on issues that we believe will be of interest to a large segment of stock market participants. Depending on the issue, we may focus our attention on individual companies, groups of companies, or on large segments of the market at large.

A recurring theme in our work is the identification of reporting practices that give investors a misleading signal, whether positive or negative, of corporate earning power. We define earning power as the ability to generate a sustainable stream of earnings that is backed by cash flow. Accordingly, our research may look into reporting practices that affect either earnings or cash flow, or both. At times, our research may look at stock prices generally, though from a fundamental and not technical point of view.

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Cash Flow Trends and Their Fundamental Drivers: Comprehensive Industry Review (Qtr 1, 2010)

Industries Identified in This Report (with GICS)

Companies Identified in This Report

Cash Flow Trends and Their Fundamental Drivers:
Comprehensive Industry Review (Qtr 1, 2010)

FREE CASH MARGIN INDEX*:

2.43	6.69	5.14
Recession Low (Mar. 2001)	**Current (Mar. 2010)**	**Previous Expansion High (June, 2004)**

The ***Free Cash Margin Index** is free cash flow measured as a percentage of revenue for the trailing twelve month period.

Introduction

This research report is part of a continuing series that examines cash flow trends and the underlying drivers that are causing changes in those trends. In the current study we conduct a review of the cash flow performance of all non-financial companies for a series of rolling twelve-month periods from the first quarter of 2000 through the first quarter of 2010. Additionally, we look at individual industry results and focus our attention on the cash flow performance of several companies in those industries that stood out with improving free cash margin and in those that suffered from significant declines in free cash margin. All companies with a current market cap of $50 million or more are included, resulting in a total sample of 3,848 companies. Please see pages 6-8 for a list of industries and sub-industries included. That list is followed by a summary of our findings.

Measured as free cash flow divided by revenue, free cash margin is a cash flow profit margin. It indicates what percent of revenue is left for shareholders in the form of free and discretionary cash flow. If the company sells its products or services for a dollar, free cash margin tells us how many cents the shareholders can take home without reducing the company's ability to generate more. Thus, as we look at cash flow trends and their underlying drivers, our particular interest is on how those factors impact free cash margin.

For more detail, our industry spreadsheets that identify trends in free cash margin and its underlying drivers for 20 separate industry sectors and 61 industries for the all available reporting periods through the first quarter of 2010 have been posted. The spreadsheets, which are updated quarterly, can be found on the Lab's website at www.mgt.gatech.edu/finlab.

Our Continuing Focus on Cash Flow

Corporate financial success is dependent not only on a company's ability to generate revenues and earnings, but also cash flow, especially free cash flow. It is free cash flow and growth in free cash flow, that discretionary stream of cash that a company can put to use for acquisitions, debt retirement, dividends and stock buybacks that works with growing earnings to drive firm value higher. Because it is "free," free cash flow comes with no strings attached. It is truly discretionary. Spending it does not impact the company's ability to generate more. A company with revenue growth will eventually lose the favor of investors if it never finds a way to generate earnings. In a similar way, a company with profits that is unable to generate cash will also experience waning investor enthusiasm. It may take a while. Investors are patient with profitable, growing companies. Ultimately, however, a company must show an ability to generate free cash flow.

Companies that consume cash must continually seek new sources of capital – whether debt or equity. At some point, those sources of capital will dry up or become prohibitively expensive if the firm does not show at least some progress toward getting closer to positive cash generation. Worse, if cash flow does not back a company's earnings, ultimately those earnings themselves may become suspect, necessitating write-downs of the resulting non-cash assets. Net losses will likely accompany those write-downs.

When free cash margin is positive, a firm is covering all ongoing claims and is able to pay dividends, reduce debt or simply add to its cash coffers. When free cash margin turns negative, ongoing claims are not being met. Cash and short-term investments can be used to meet the shortfall. However, on-hand cash and short-term investments are not an unlimited source of funds. Firms can borrow money to meet their needs. However, even if this were an option, increasing debt levels add new, unwanted risks. Equity issues provide another avenue, but capital markets can be painfully dilutive when share prices are depressed for firms that are seemingly unable to generate cash.

During periods of growth, firms may have problems generating cash as profits are consumed with growth-related investments in working capital and property, plant and equipment needed to support that growth. During recessions, cash generation can be particularly problematic as revenues and profits decline, draining the economic engine that supports cash generation. Regardless of the economic environment, however, free cash margin serves as an important measure of long-term financial health for individual companies, industries and the economy as a whole. We think that by periodically examining their cash generating ability, we will gain insight into the overall financial health of important segments of U.S. firms. With data dating back to 2000, we will see how the cash-generating performance of these firms presently compares with their performance during previous periods of economic contraction (e.g., 2001 and 2008-2009) and economic expansion.

Cash Flow Definitions

Free cash flow is the cash flow equivalent of the income statement "bottom line." Like net income, free cash flow is available for shareholders after all prior claims have been satisfied. However, also like net income, which, to facilitate analysis, can be divided into certain sub-measures of performance, like gross profit and operating profit, free cash flow can be similarly divided. Thus, while our primary focus is on free cash flow and free cash margin, or free cash flow as a percentage of revenue, we analyze here the fundamental drivers underlying two distinct, but also closely related, measures of cash flow:

1) Operating cash flow and operating cash margin - cash flow from operations after interest charges and income taxes. Operating cash margin is operating cash flow divided by revenue.

2) Free cash flow and free cash margin - cash flow available for common shareholders that can be used for such discretionary purposes as stock buybacks and dividends without affecting the firm's ability to grow and generate more. This measure is calculated as operating cash flow less preferred dividends and net capital expenditures. Free cash margin is free cash flow divided by revenue.

Data and Methodology

Our data is provided by Cash Flow Analytics, LLC[1]. As noted, each data amount is for a rolling twelve-month period ending with the quarter end in question. For example, cash flow amounts for March 31, 2010 represent amounts for the twelve months (four quarters) ending March 31, 2010.

Industries

The 20 industry sectors and 61 sub-industries are as follows:

- **Energy – 0010**
- Energy Equipment & Services
- Oil, Gas & Consumable Fuels
- **Materials – 0020**
- Chemicals
- Construction Materials
- Containers & Packaging
- Metals & Mining
- Paper & Forest Products
- **Capital Goods – 0030**
- Aerospace & Defense
- Building Products
- Construction & Engineering

[1] Cash Flow Analytics, LLC, 1727 Malvern Place, Duluth, Georgia, 30097. www.cashflowanalytics.com. Charles Mulford is a principal in Cash Flow Analytics, LLC.

- Electrical Equipment
- Industrial Conglomerates
- Machinery
- Trading Companies & Distributors
- **Commercial & Professional Services – 0040**
- Commercial Services & Supplies
- Professional Services
- **Transportation – 0050**
- Air Freight & Logistics
- Airlines
- Marine
- Road & Rail
- Transportation Infrastructure
- **Automobiles & Components – 0060**
- Auto Components
- Automobiles
- **Consumer Durables & Apparel – 0070**
- Household Durables
- Leisure Equipment & Products
- Textiles, Apparel & Luxury Goods
- **Consumer Services – 0080**
- Hotels, Restaurants & Leisure
- Diversified Consumer Services
- **Media – 0090**
- Media
- **Retailing – 0100**
- Distributors
- Internet & Catalog Retail
- Multiline Retail
- Specialty Retail
- **Food & Staples Retailing – 0110**
- Food & Staples Retailing
- **Food Beverage & Tobacco – 0120**
- Beverages
- Food Products
- Tobacco
- **Household & Personal Products – 0130**
- Household Products
- Personal Products
- **Health Care Equipment & Services – 0140**
- Health Care Equipment & Supplies
- Health Care Providers & Services
- Health Care Technology
- **Pharmaceuticals, Biotechnology & Life Sciences – 0150**
- Biotechnology
- Pharmaceuticals
- Life Sciences Tools & Services

- **Software & Services – 0160**
- Internet Software & Services
- It Services
- Software
- **Technology Hardware & Equipment - 0170**
- Communications Equipment
- Computers & Peripherals
- Electronic Equipment, Instruments & Components
- Office Electronics
- Semiconductor Equipment & Products
- **Semiconductors & Semiconductor Equipment – 0180**
- Semiconductors & Semiconductor Equipment
- **Telecommunication Services – 0190**
- Diversified Telecommunication Services
- Wireless Telecommunication Services
- **Utilities – 0200**
- Electric Utilities
- Gas Utilities
- Multi-utilities
- Water Utilities
- Independent Power Producers & Energy Traders

Results

Summary

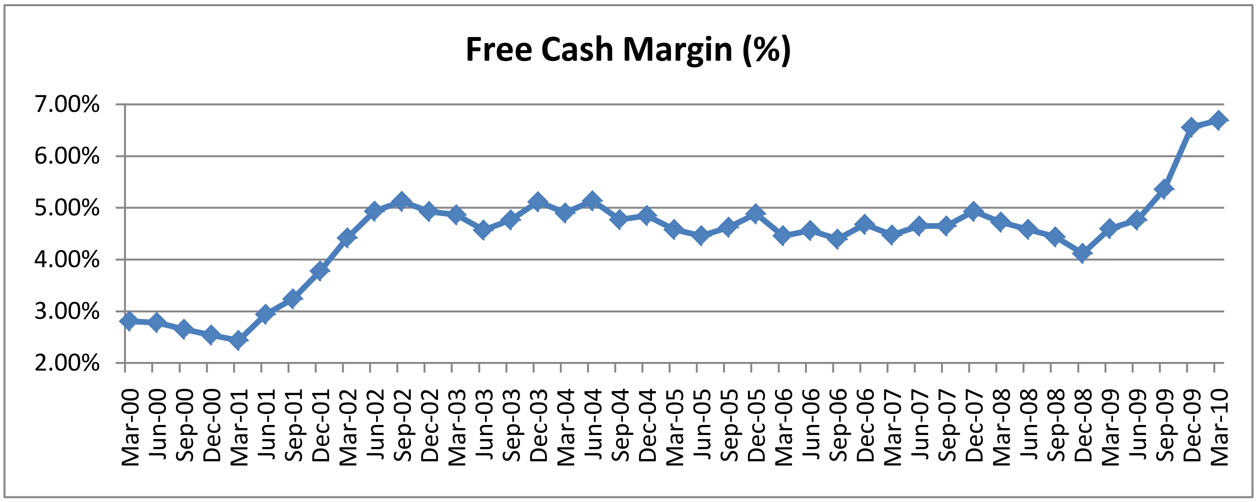
Free cash margin continued to climb in the first quarter of 2010 reaching 6.69%, its highest recorded mark since the lab began collecting the data in March 2000. This is a slight increase from the free cash margin of 6.56% for the four quarters ending December 2009 and a significant increase from March 2009 when free cash margin was 4.60%. The main drivers of this increase in free cash margin are increases in operating cushion and improvements in net margin. In previous quarters, the main driver has been a significant decrease capital expenditures as a % of revenue, however in Q1 2010, that metric stayed flat. This most likely occurred because managers have continued to cut capital expenditures to the bone over the last two years.

Results for all non-financial companies

In the exhibits below we present a graph of free cash margin and several of its underlying drivers. These exhibits were constructed with data from our complete sample of companies, including all industries and sub-industries. A total of 3,848 companies are included. These graphs are followed with exhibits that show the trend in free cash margin for each of the 20 industry groups. For more details on each individual industry, please refer to the individual industry spreadsheets reports that are available on our website (www.mgt.gatech.edu/finlab).

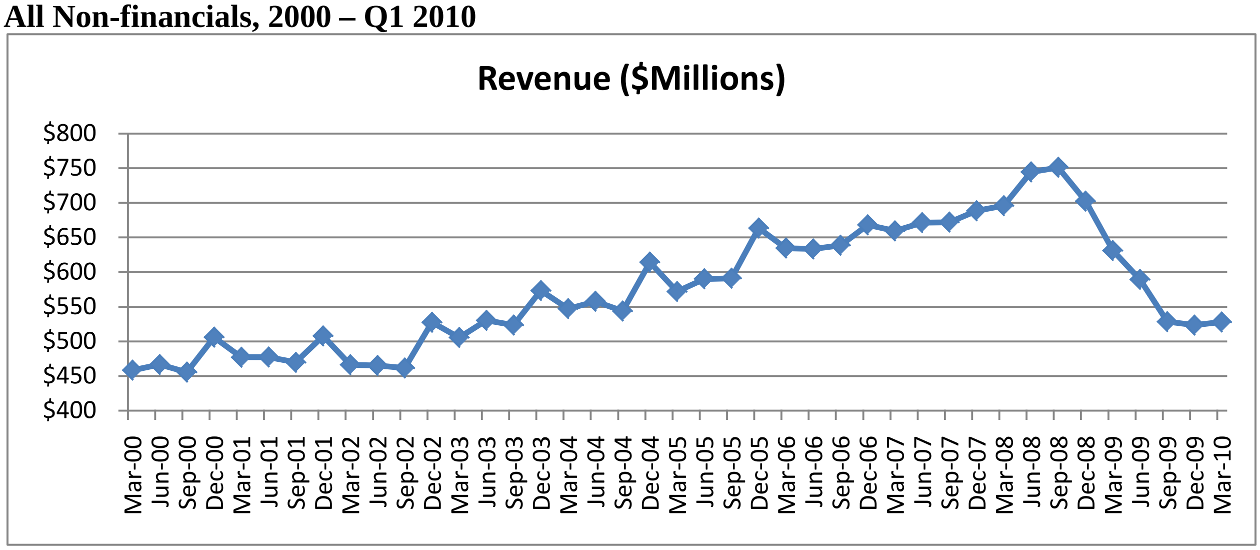
Free cash margin continued its recent rise in the 1st quarter of 2010. With free cash margin at 6.69%, it is up slightly from the 6.56% recorded last quarter and is currently at the highest level recorded since our lab began tracking the metric in 2000. Despite declining revenues, since reaching a low of 4.12% in December 2008, free cash margin has improved every quarter since then. As stated in previous reports, in order to offset the effects on free cash flow of declining revenues, companies may improve profitability or reduce capital expenditures. Over the past two years, companies have mostly cut capital expenditures, however, capital expenditures as a % of revenue stayed flat in twelve months ending March 2010. Revenues also stayed flat, but managers increased operating cushion, increased gross margin, and continued to decrease SG&A expenses as a % of revenue during the four quarters ending March 2010.

All Non-financials, 2000 – Q1 2010

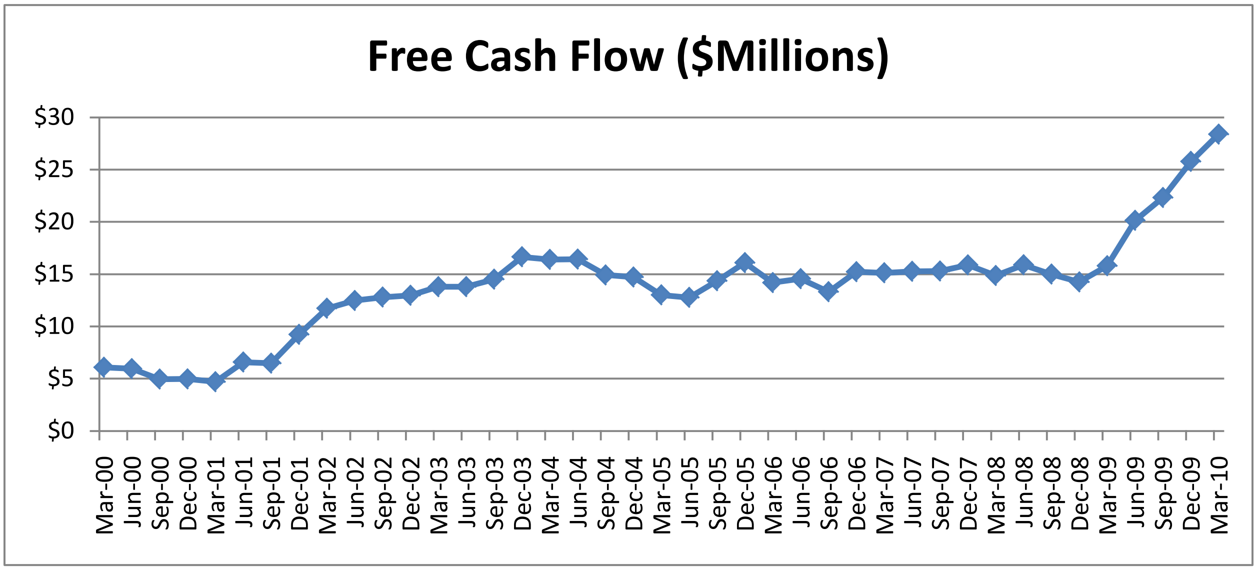


Revenues have essentially been flat for three consecutive quarters; however companies are still generating increased free cash flow as shown in the charts below.

All Non-financials, 2000 – Q1 2010



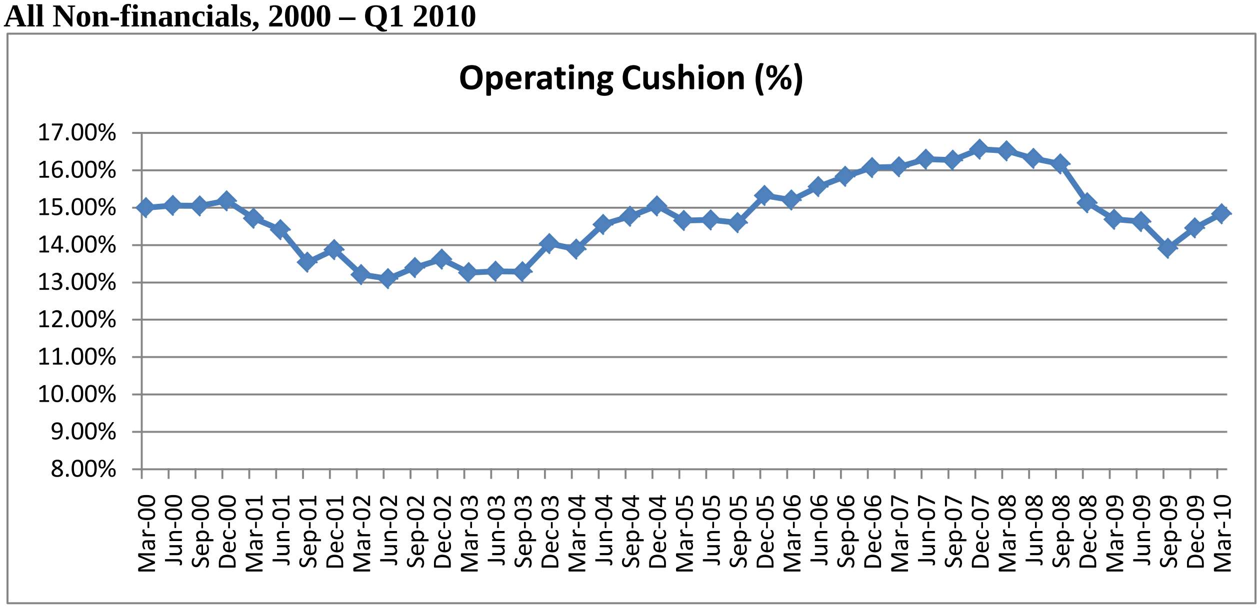
All Non-financials, 2000 – Q1 2010



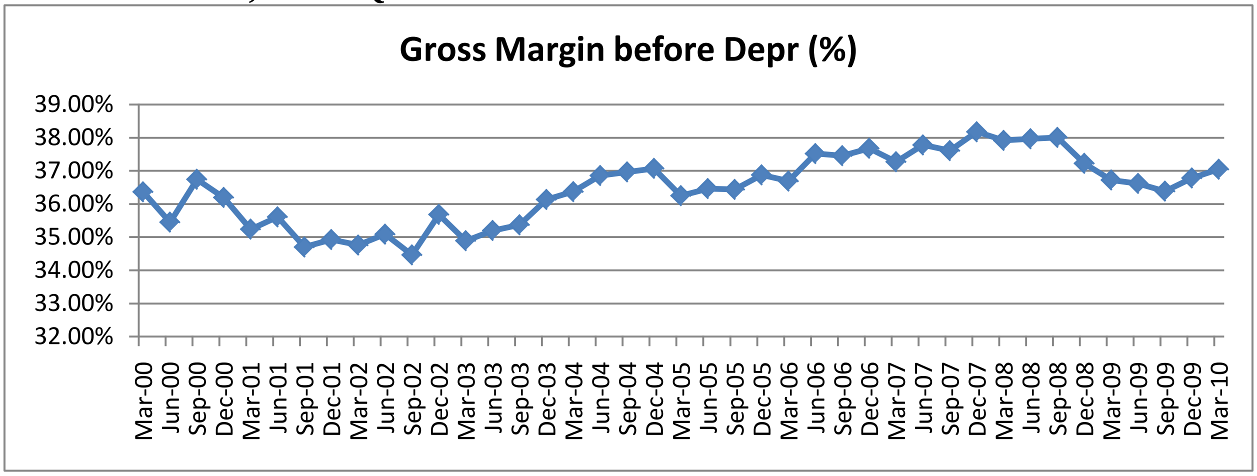
An increase in operating cushion and a decrease in the cash cycle are the main metrics fueling the Q1 2010 improvements in free cash margin.

Operating cushion, or operating profit before depreciation and amortization, increased again, helped by improving gross margin and declining SG&A expenditures as a % of revenue. As cited in previous reports, we believe managers continue to excellent job of controlling costs and improving efficiency. Additionally, this is shown in the companies increasing net margin. As the U.S. economy once again begins to grow, these companies should be poised to boost profitability and operating cushion further.

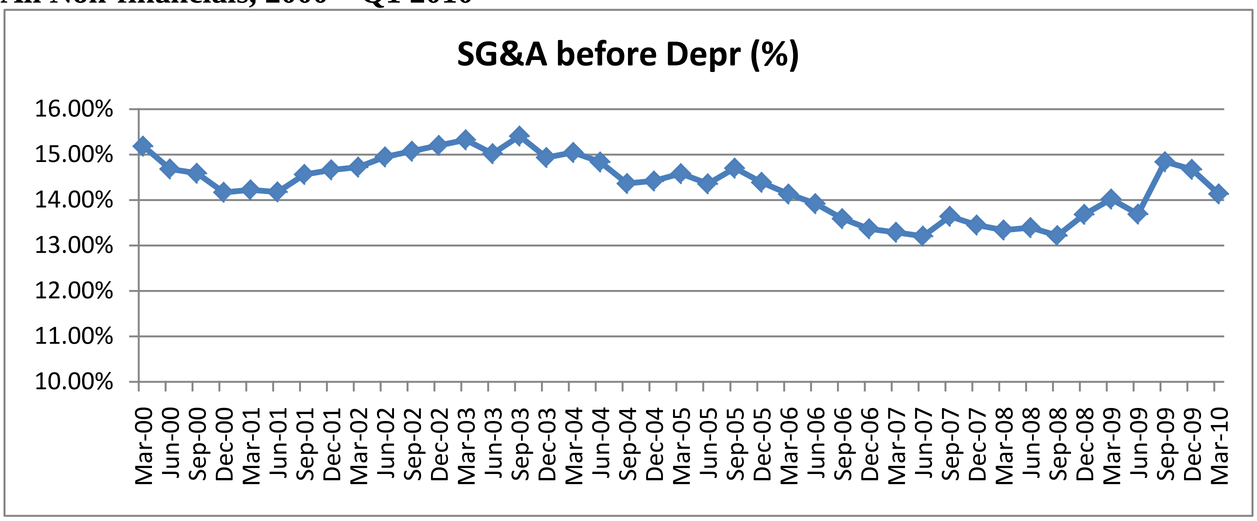
All Non-financials, 2000 – Q1 2010



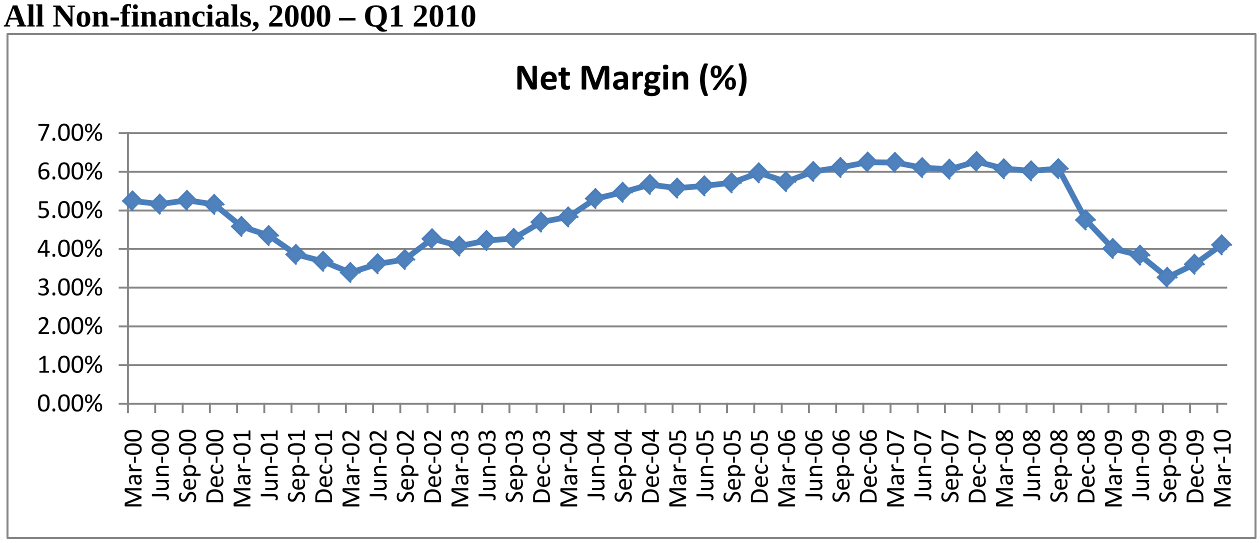
All Non-financials, 2000 – Q1 2010



All Non-financials, 2000 – Q1 2010

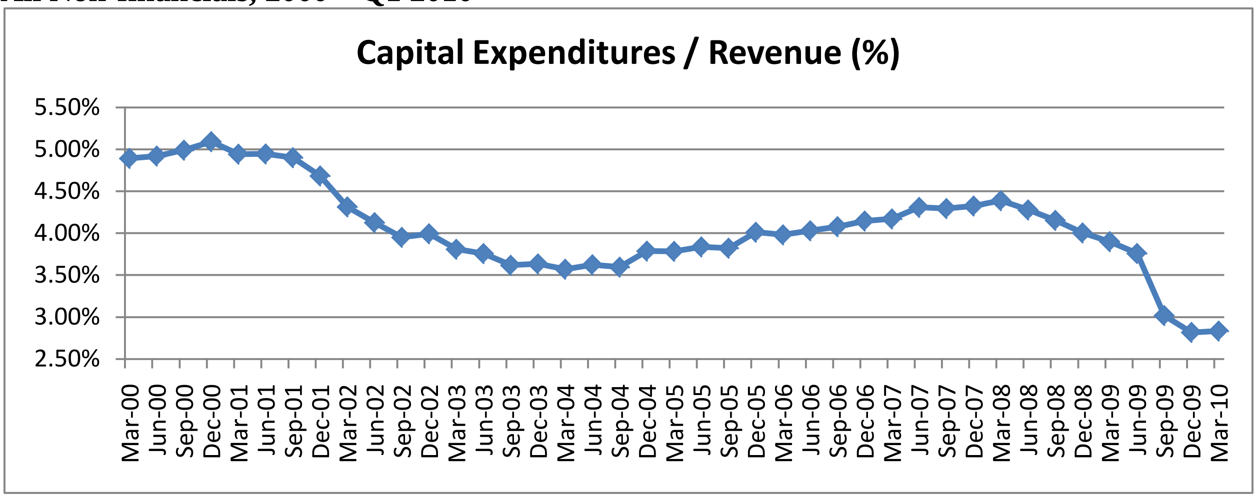


All Non-financials, 2000 – Q1 2010



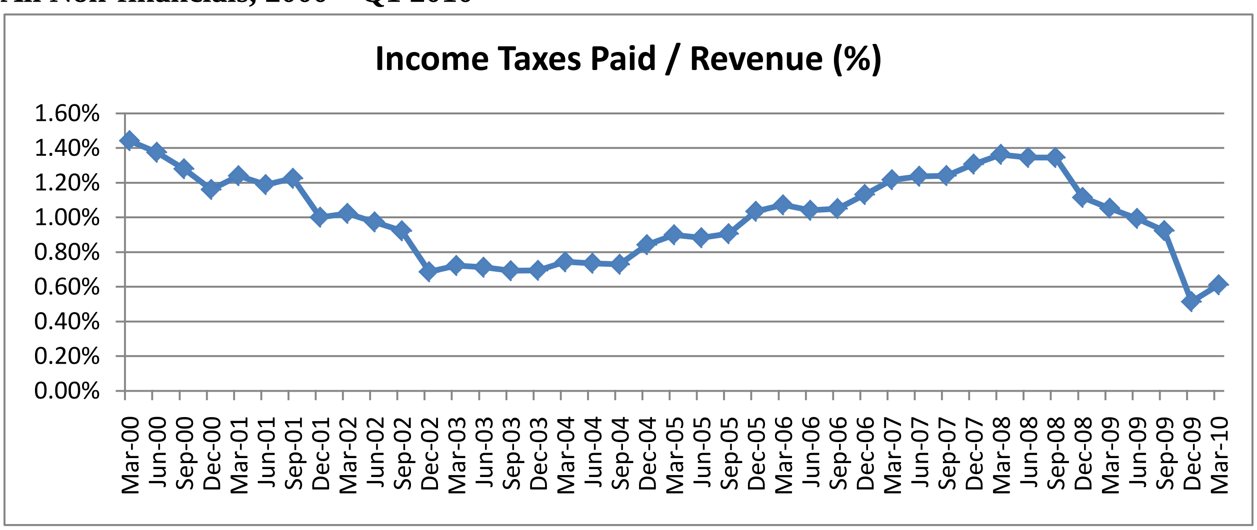
Capital expenditures as a % of revenue stayed flat in the four quarters ending March 2010. Since this metric is the same as last period, it is possible that managers have cut all the capital expenditures they possibly can and we may begin to see increases in capital expenditures. As mentioned in previous reports this marked decline in capital expenditures has boosted free cash margin, at some point companies will find it necessary to once again increase capital spending, which could weigh on free cash margin.

All Non-financials, 2000 – Q1 2010



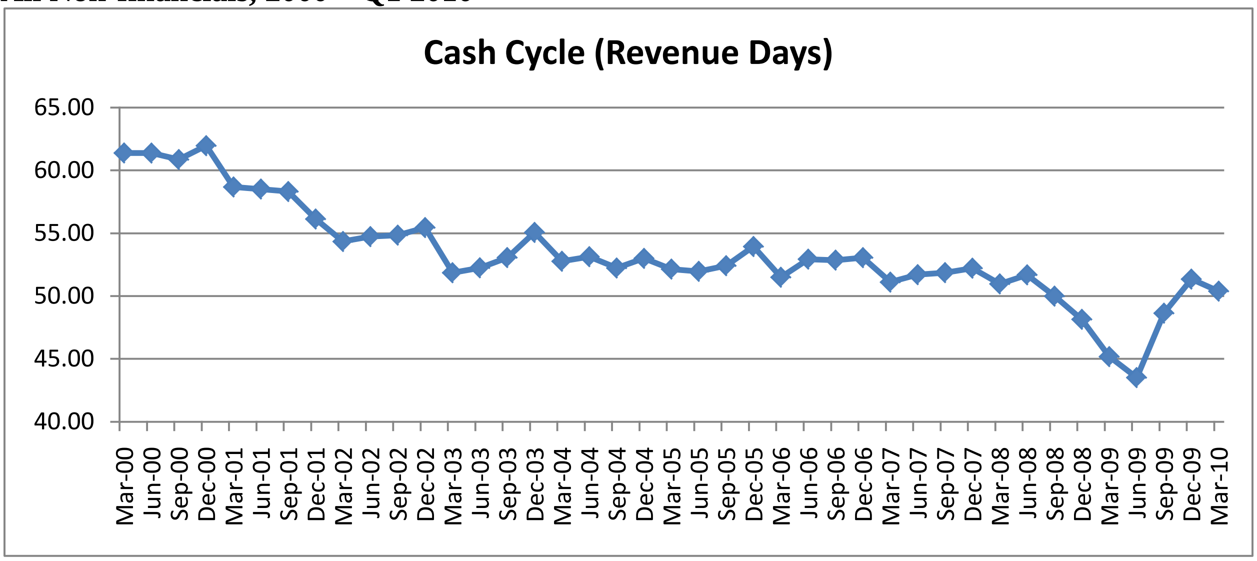
Income taxes paid as a % of revenue rose slightly from 0.52% in December 2009 to 0.61% in March 2010.

All Non-financials, 2000 – Q1 2010

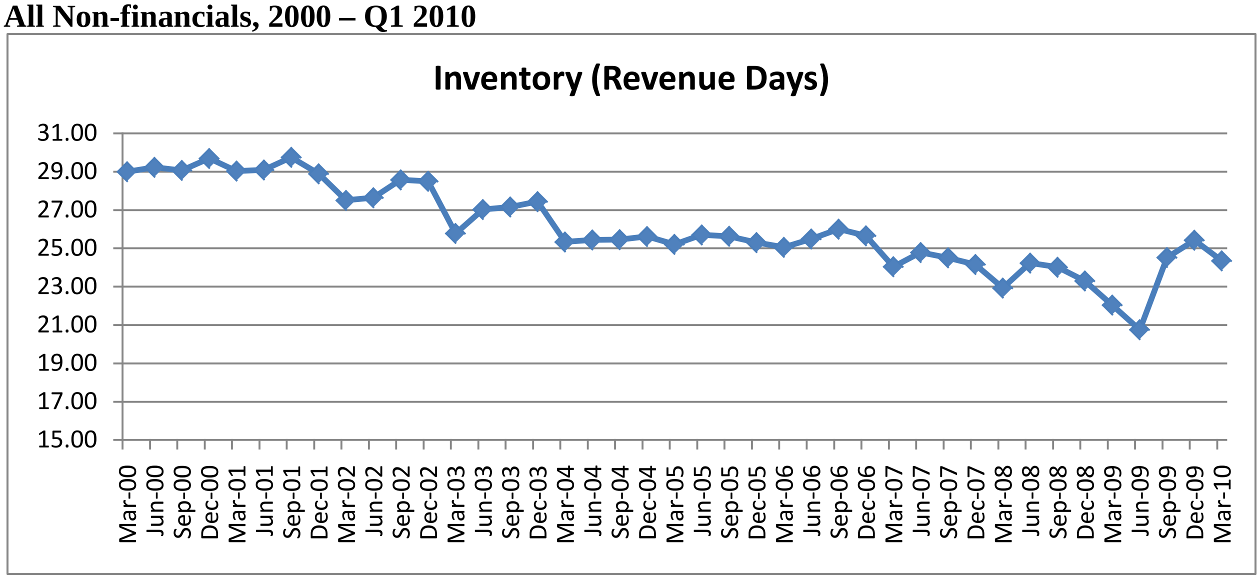


The cash cycle, which measures the proportion of operating cash flow carried in working capital and is measured receivables days plus inventory days less payables days, fell last quarter after it increased for the previous two quarters. Driving the decrease in the cash cycle was a decrease in median inventory days to 24.35 days in March 2010 from 25.43 days in December 2009 and an increase in payable days to 26.96 days in March 2010 from 26.54 in December 2009, offset somewhat by an increase in receivable days to 53.01 days in March 2010 from 52.46 days in December 2009. The decrease in the cash cycle is putting some upward pressure on free cash margin.

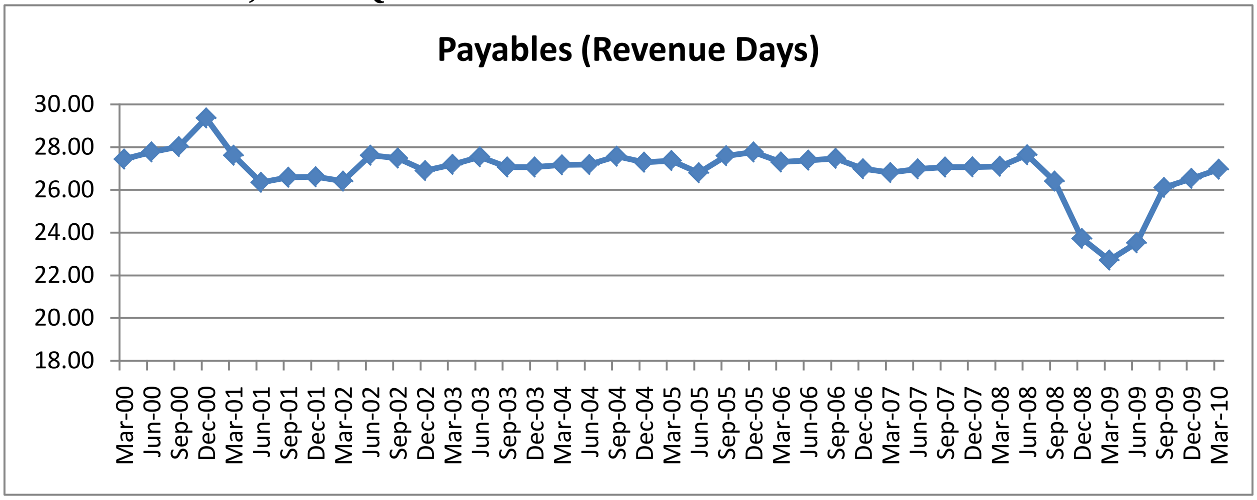
All Non-financials, 2000 – Q1 2010



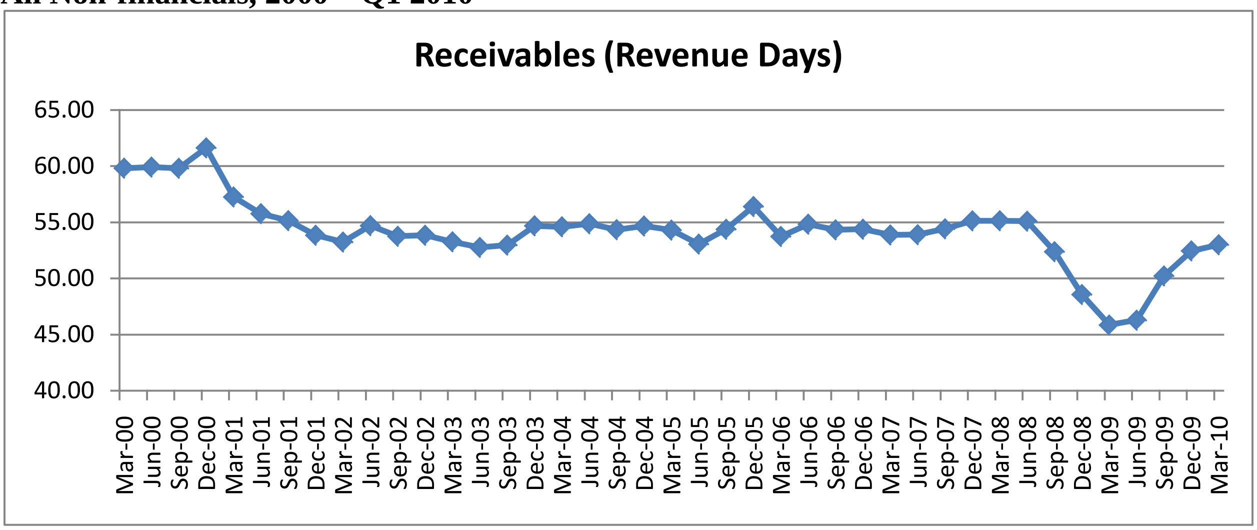
All Non-financials, 2000 – Q1 2010



All Non-financials, 2000 – Q1 2010



All Non-financials, 2000 – Q1 2010



Individual Industry Results

In observing the individual industry trends in free cash margin, the increases seen in the sample-wide data have also shown up across most industries studied. Of the 20 industry sectors studied, during the twelve months ended March 2010 when compared with the twelve months ended March 2009, we saw moderate to substantial improvement in free cash margin in six industries, relatively stable free cash margin in thirteen industries, and declining free cash margin in one industry.

Industry sectors with improving free cash margin:

Energy
Capital Goods
Automobiles and Components
Consumer Services
Pharmaceuticals, Biotechnology and Life Sciences
Semiconductors and Semiconductor Equipment

Industry sectors with stable free cash margin:

Materials
Commercial and Professional Services
Transporation
Consumer Durables and Apparel
Media
Retailing
Food and Staples Retailing
Food, Beverage and Tobacco
Household and Personal Products
Healthcare Equipment and Services
Sofware and Services
Technology Hardware and Equipment
Utilities

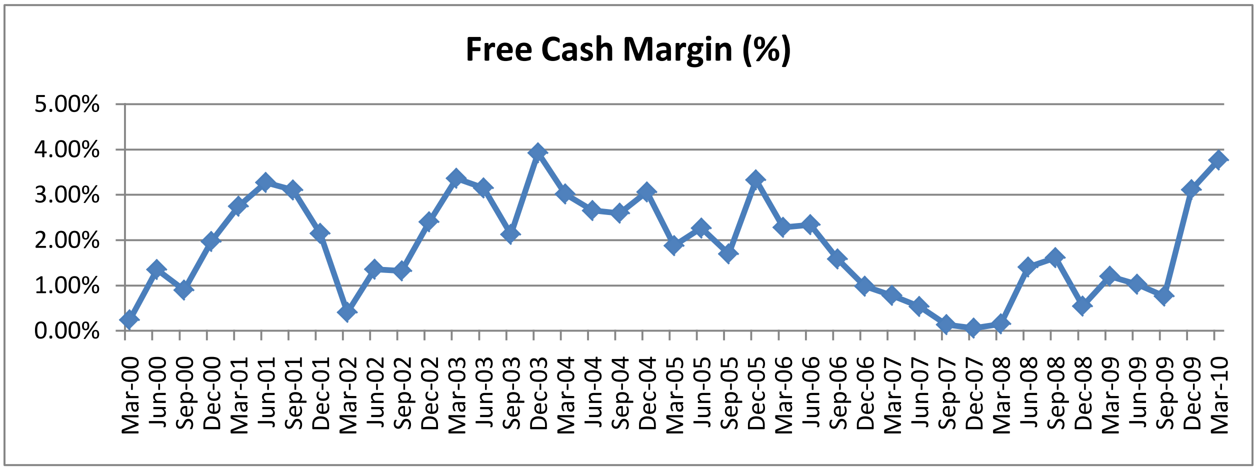
Industry sectors with declining free cash margin:

Telecommunications Services

Please refer to the individual industry spreadsheets, available on our website, for further detail on the industries discussed in this report.

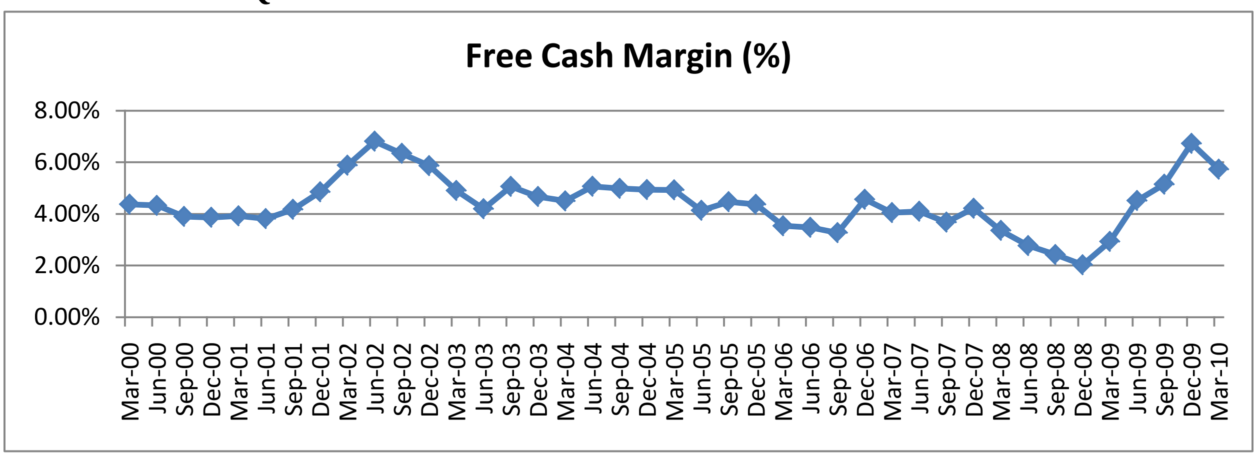
Our results show the following trends in free cash margin:

Energy: 2000 – Q1 2010



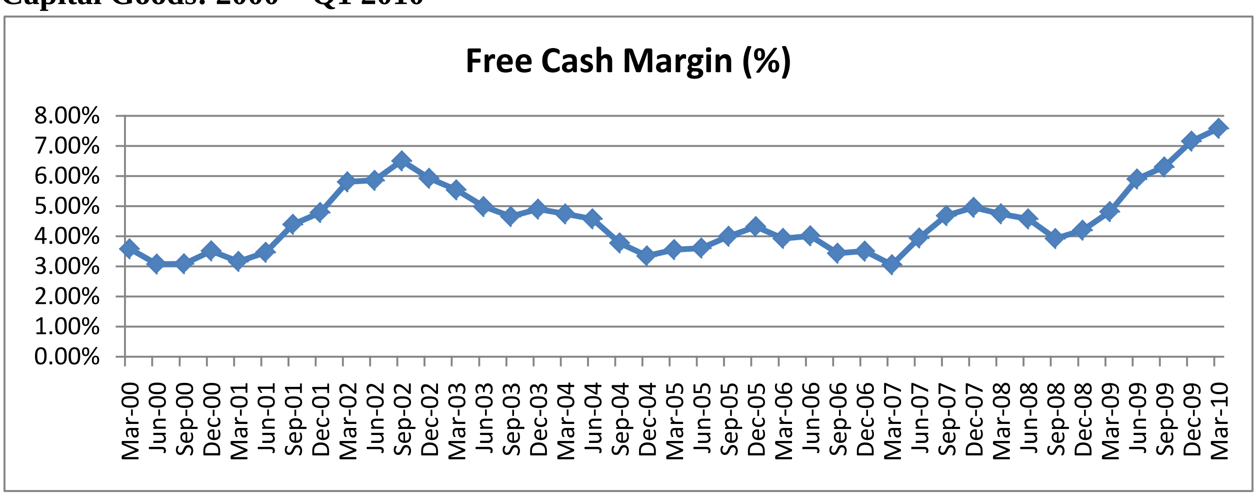
See industry specific spreadsheet for details.

Materials: 2000 – Q1 2010



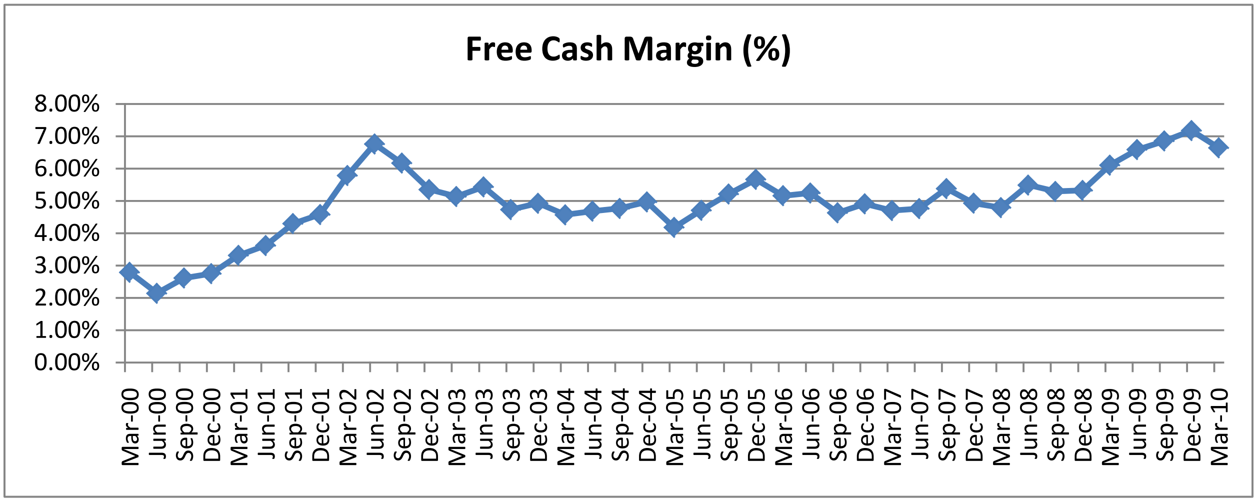
See industry specific spreadsheet for details.

Capital Goods: 2000 – Q1 2010



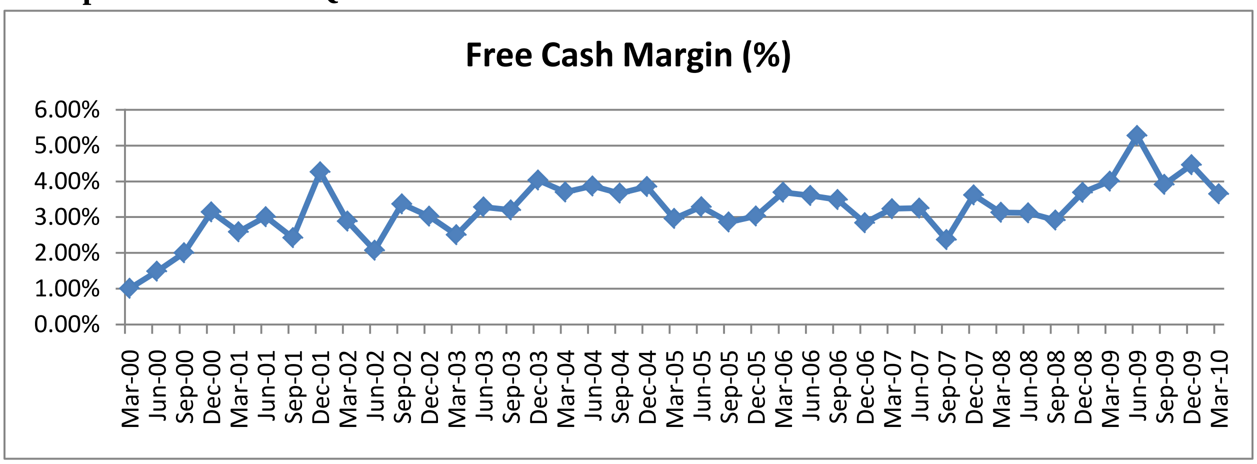
See industry specific spreadsheet for details.

Commercial and Professional Services: 2000 – Q1 2010



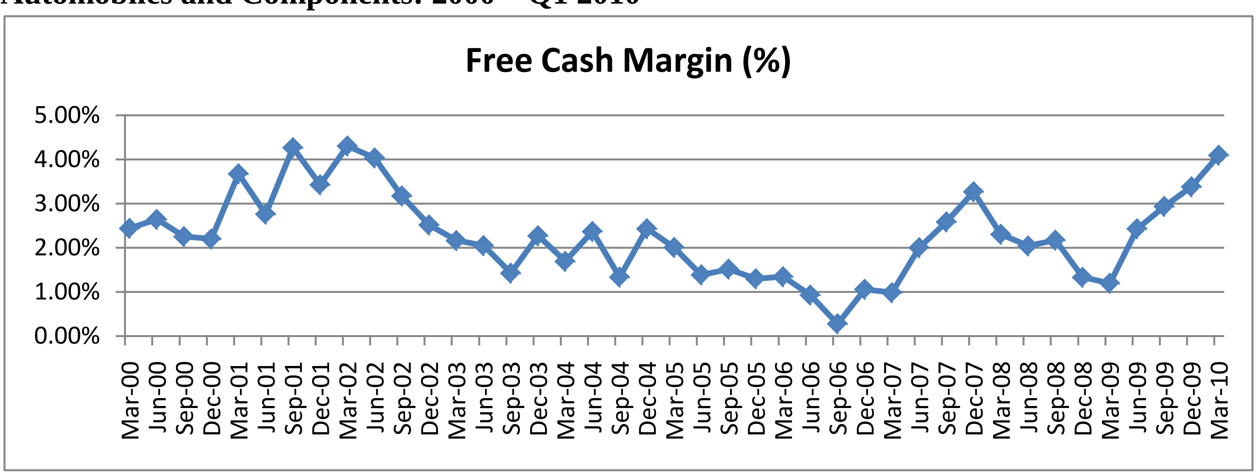
See industry specific spreadsheet for details.

Transporation: 2000 – Q1 2010



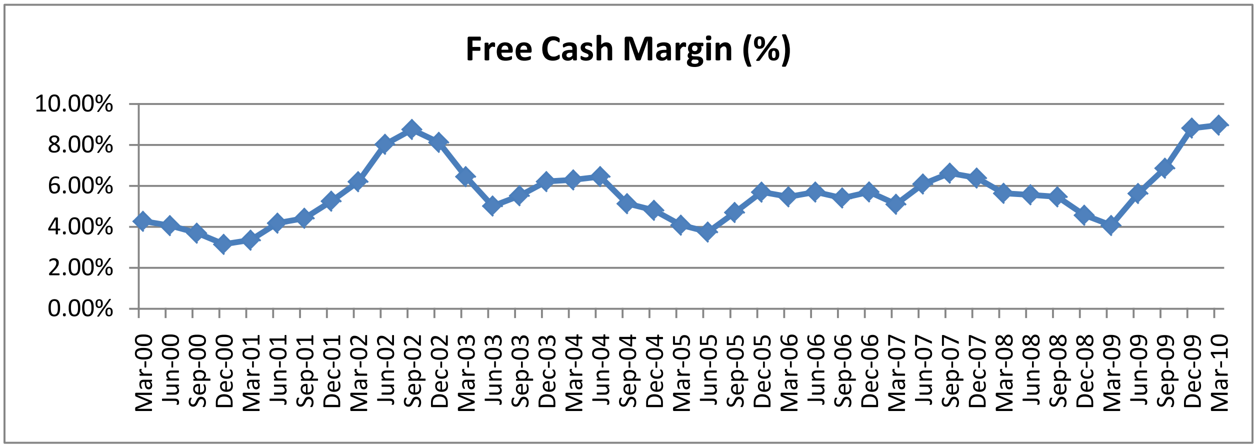
See industry specific spreadsheet for details.

Automobiles and Components: 2000 – Q1 2010



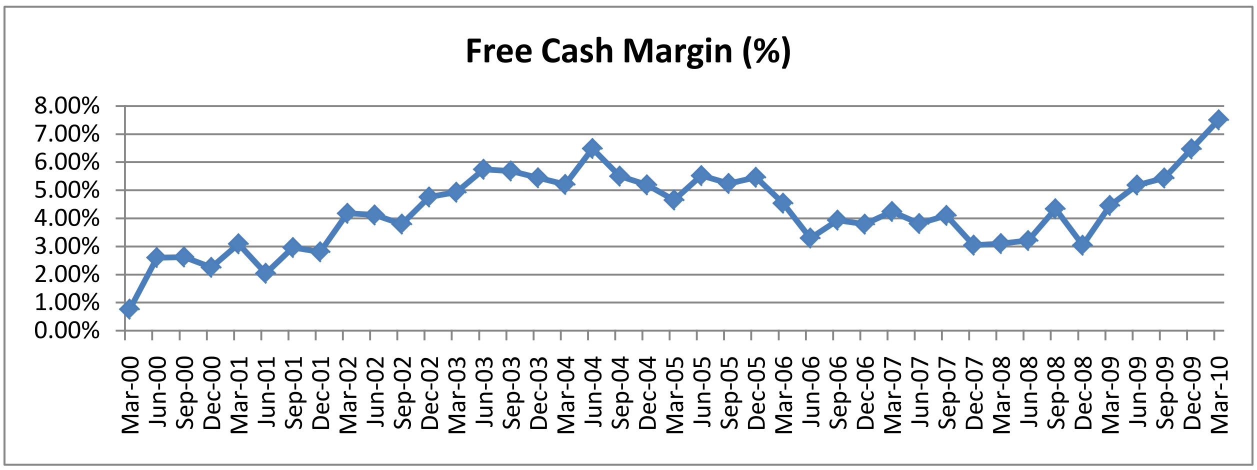
See industry specific spreadsheet for details.

Consumer Durables and Apparel: 2000 – Q1 2010



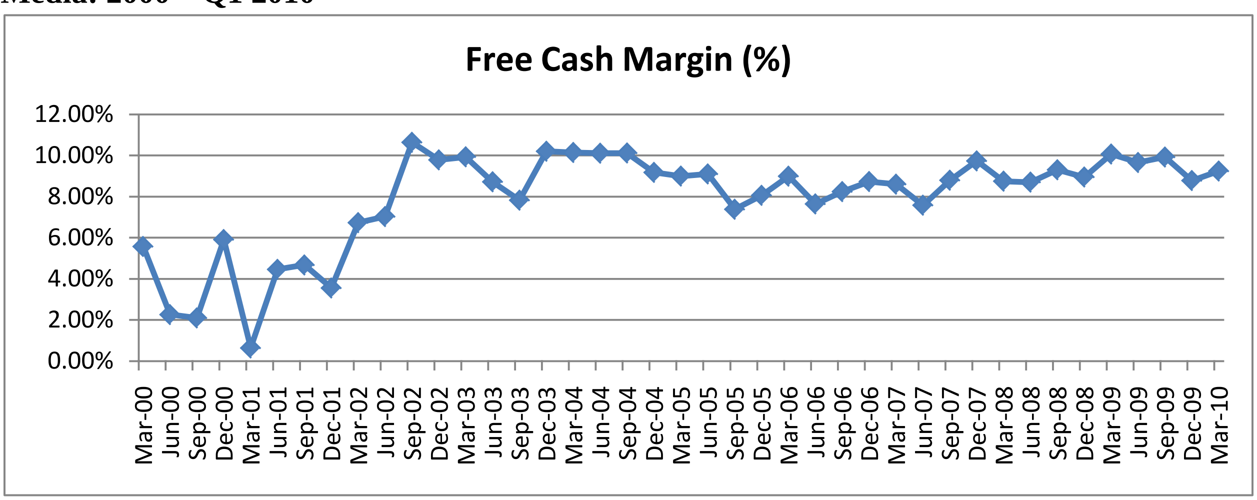
See industry specific spreadsheet for details.

Consumer Services: 2000 – Q1 2010



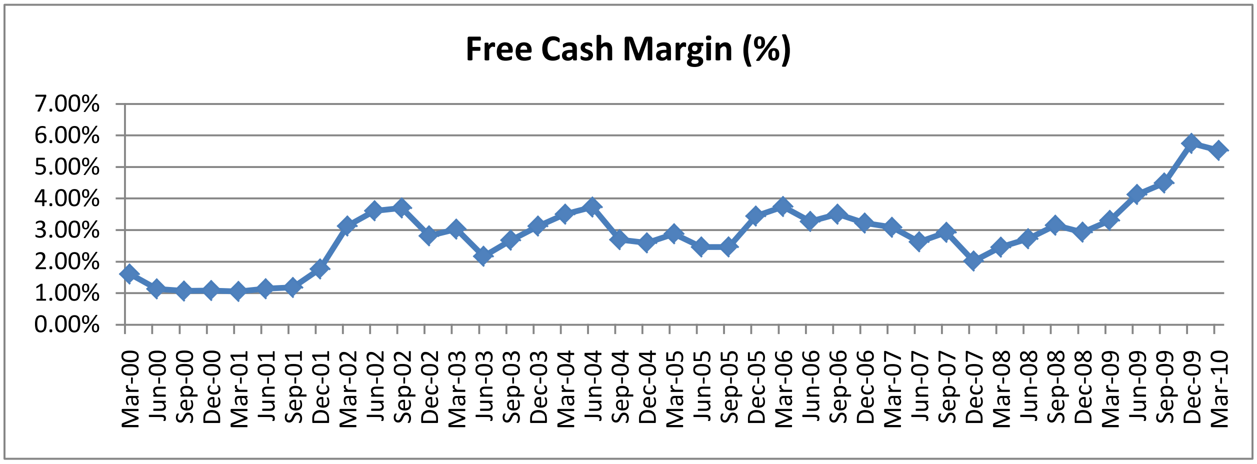
See industry specific spreadsheet for details.

Media: 2000 – Q1 2010



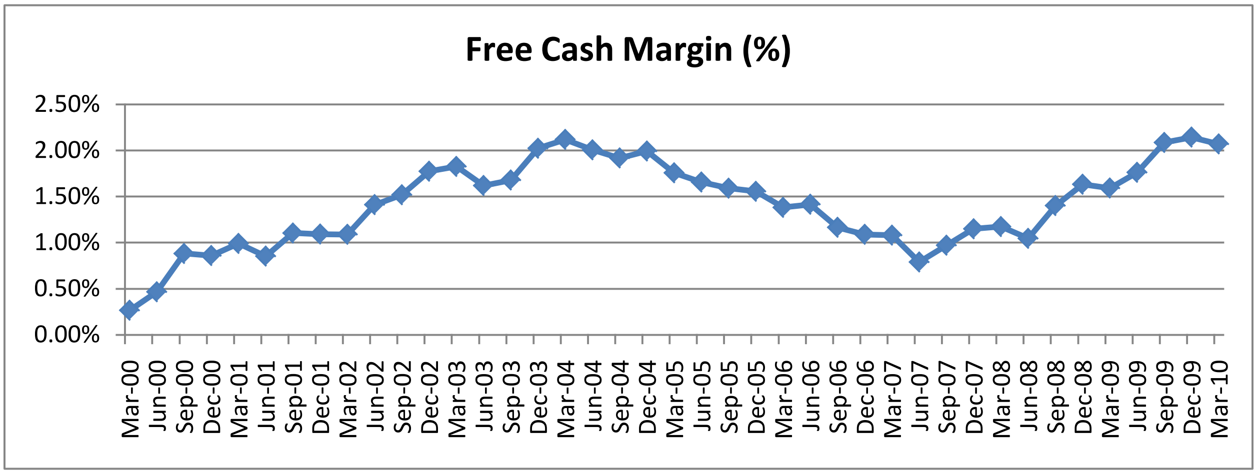
See industry specific spreadsheet for details.

Retailing: 2000 – Q1 2010



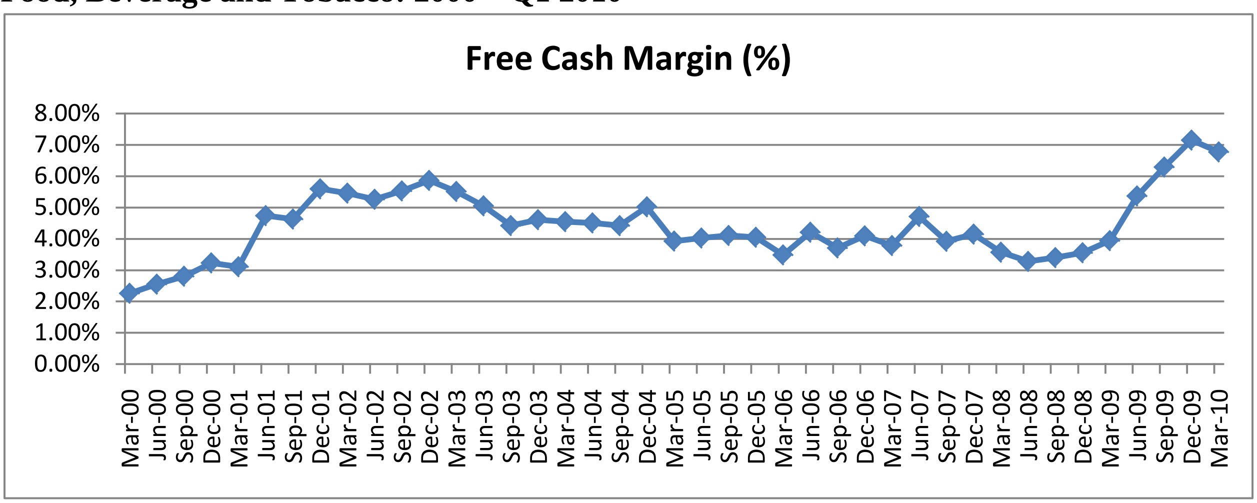
See industry specific spreadsheet for details.

Food and Staples Retailing: 2000 – Q1 2010



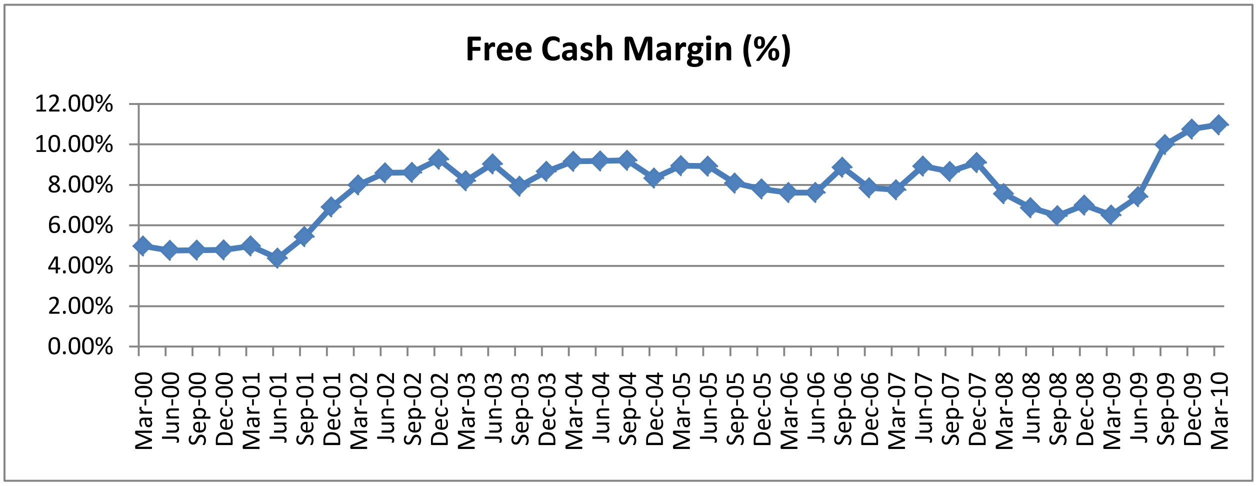
See industry specific spreadsheet for details.

Food, Beverage and Tobacco: 2000 – Q1 2010



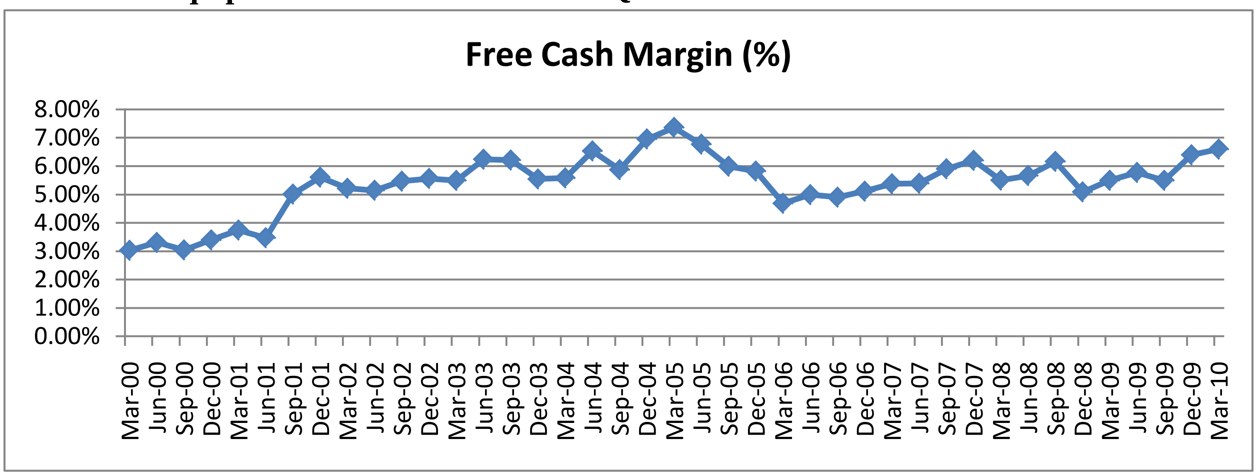
See industry specific spreadsheet for details.

Household and Personal Products: 2000 – Q1 2010



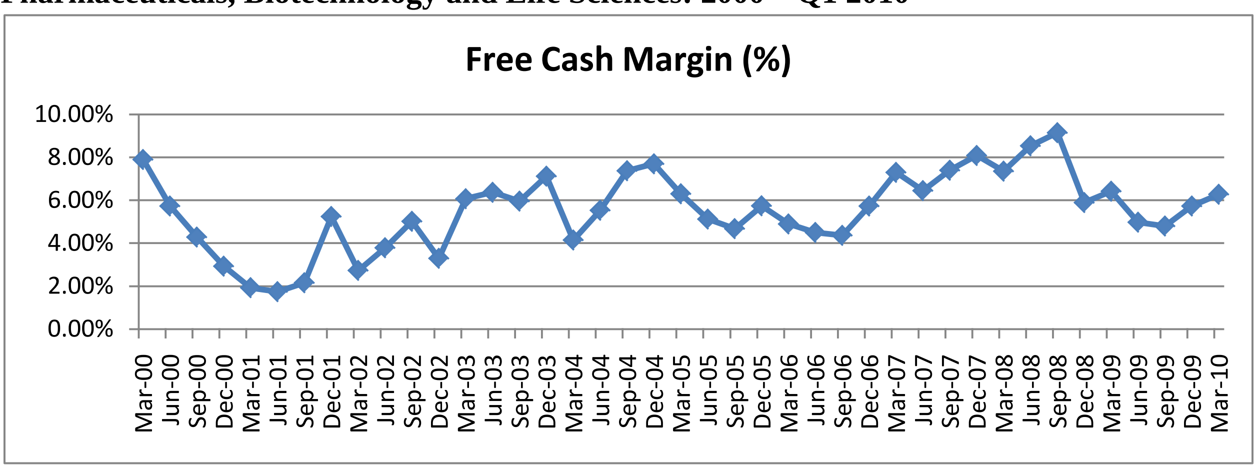
See industry specific spreadsheet for details.

Healthcare Equipment and Services: 2000 – Q1 2010



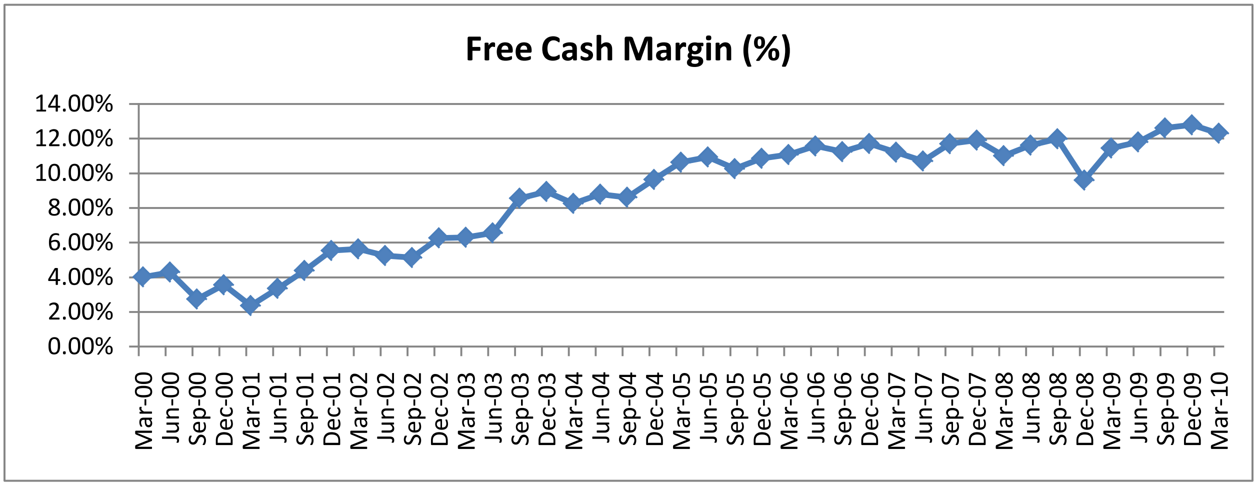
See industry specific spreadsheet for details.

Pharmaceuticals, Biotechnology and Life Sciences: 2000 – Q1 2010



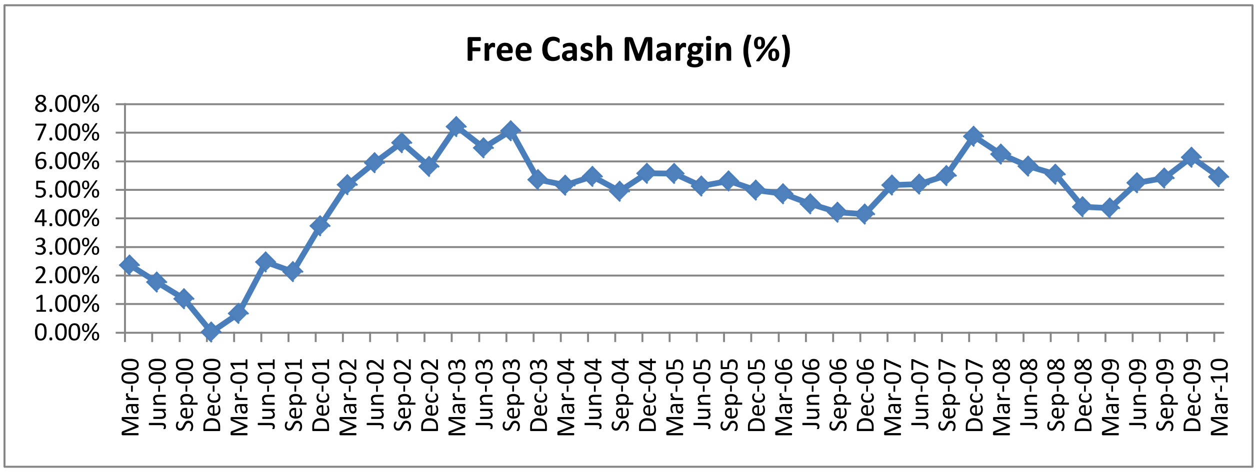
See industry specific spreadsheet for details.

Sofware and Services: 2000 – Q1 2010



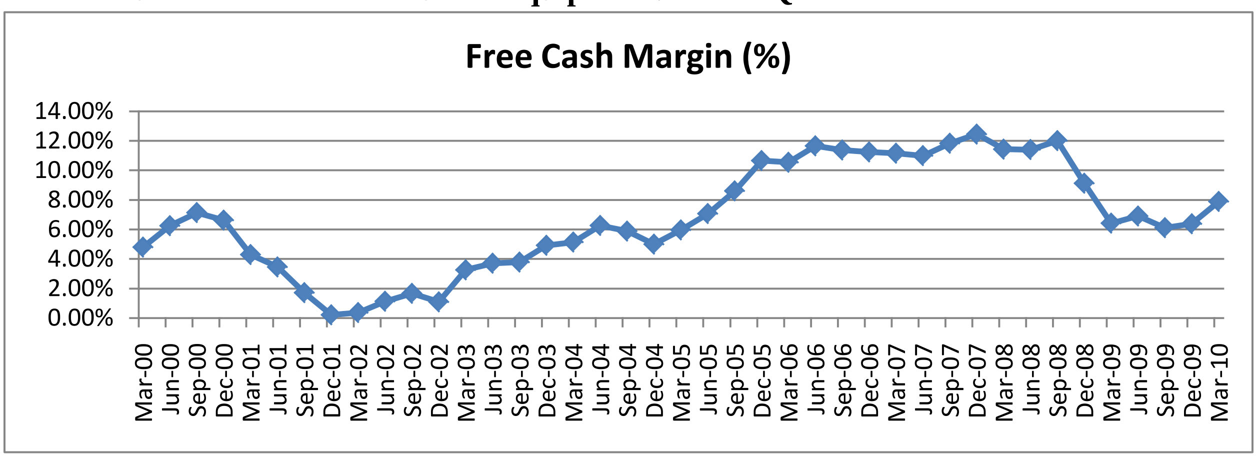
See industry specific spreadsheet for details.

Technology Hardware and Equipment: 2000 – Q1 2010



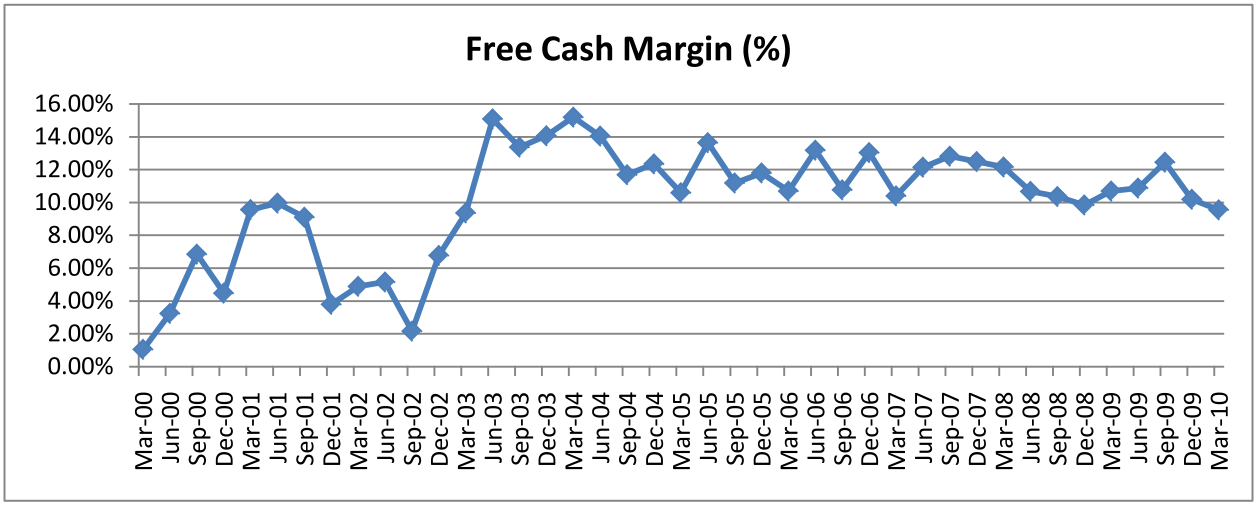
See industry specific spreadsheet for details.

Semiconductors and Semiconductor Equipment: 2000 – Q1 2010



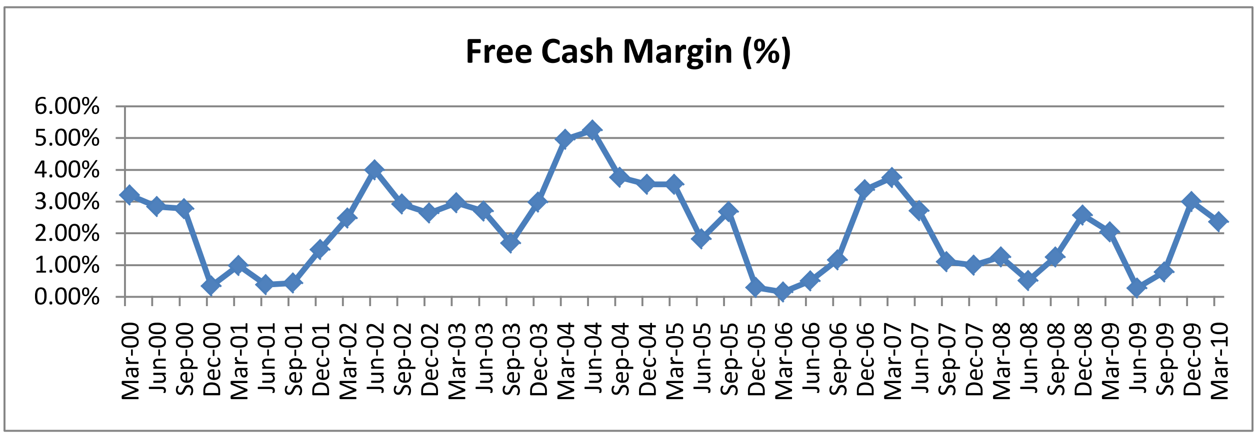
See industry specific spreadsheet for details.

Telecommunications Services: 2000 – Q1 2010



See industry specific spreadsheet for details.

Utilities: 2000 – Q1 2010



See industry specific spreadsheet for details.

The Standouts: A Closer Look

The drivers of improvements or declines in free cash margin consist of factors that impact profitability and efficiency. On the profitability front, operating cushion measures operating profit, exclusive of the non-cash expenses, depreciation and amortization. Factors impacting operating cushion consist of gross margin (excluding depreciation and amortization), and SG&A% (excluding depreciation and amortization). Also impacting profitability and a firm's ability to generate free cash flow, but excluded from operating cushion, is income taxes paid, which we measure as a percent of revenue. Capital expenditures do not impact profitability directly, but through depreciation. However, these expenditures are subtracted in computing free cash flow. It is also important to look at capital expenditures because these are investments in fixed assets that will likely improve a company's ability to generate revenue, and subsequent profit, in the future. Like operating expenses and taxes, we measure capital expenditures as a percent of revenue.

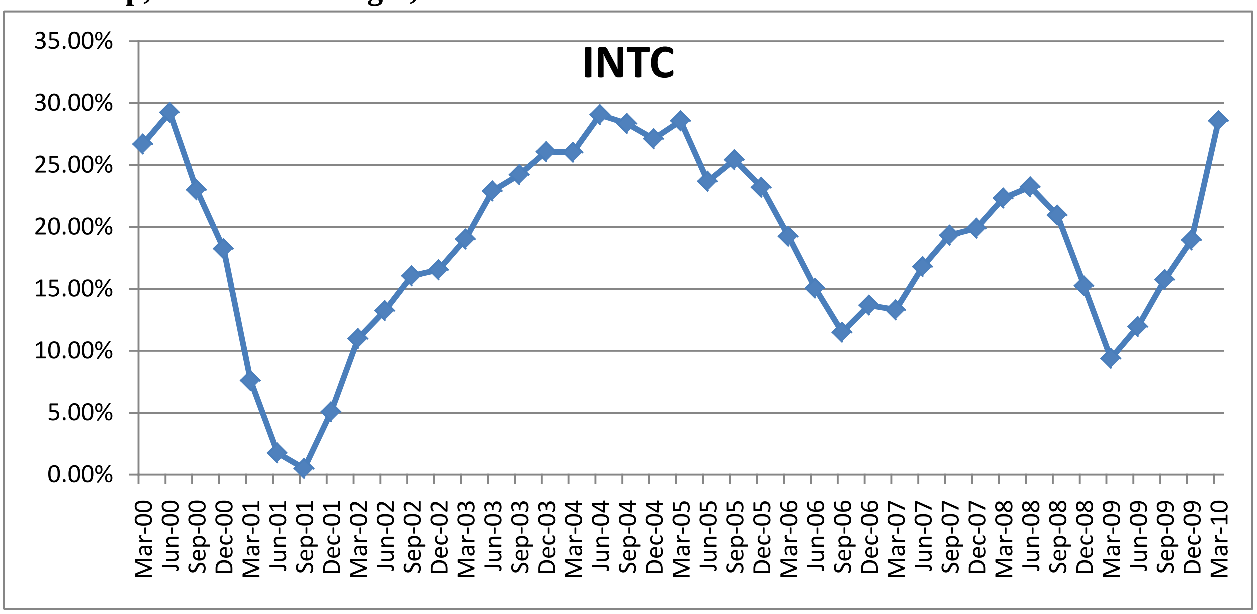
On the efficiency front, increases in receivables and inventory consume free cash flow. Increases in accounts payable provide free cash flow. The combination of receivables days plus inventory days less payables days is a firm's cash cycle. Reductions in the cash cycle provide free cash flow, while increases in the cash cycle consume free cash flow. We give consideration to all of these factors when analyzing changes in free cash margin for the standout firms discussed in this section.

Improving free cash margin

Among the industry sectors with improving free cash margin, the one group that stood out is Semiconductors and Semiconductor Equipment. For this group, free cash margin improved to 7.89% for the twelve months ended March 2010, up from 6.42 % in March 2009. We will look at two interesting stories in Intel Corp. (INTC) and Advanced Micro Devices (AMD).

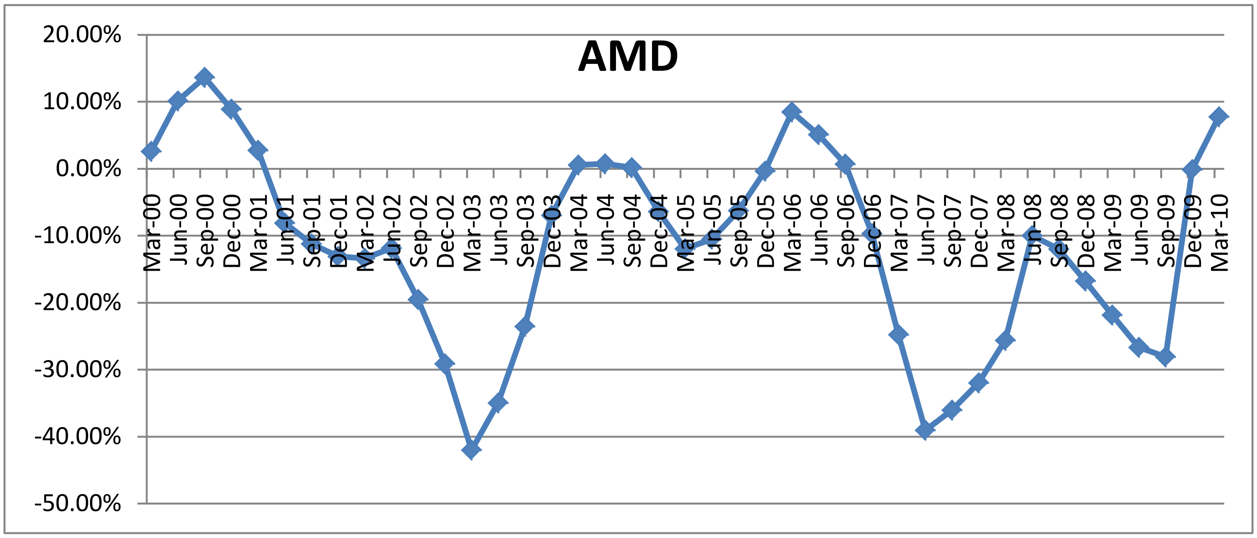
Graphs of free cash margin for these companies across the period studied are provided below. With each graph we also provide a short summary of the primary drivers or factors that we think were behind the observed changes in free cash margin for the selected firms. For more details regarding the industries, please refer to the separate industry spreadsheets found on our website.

Intel Corp, Free Cash Margin, March 2000 – March 2010



Intel Corp. (INTC). Free cash margin rose from 9.38% for the twelve months ended March 2009 to 28.57% for the twelve months ended March 2010. This strong increase in free cash margin was driven by two main factors. First, the company's operating cushion rose from 38.69% in March 2009 to 45.0% in March 2010. The second driver of free cash margin is a decrease in capital expenditures to revenue %, which fell from 16.54% for the twelve months ending March 2009 to 10.28% for the twelve months ending March 2010. Additionally, the cash cycle decreased slightly from 36.04 revenue days in March 2009 to 31.14 revenue days in March 2010, and income taxes paid as % of revenue dropped from 10.66% in 2009 to 2.69% in 2010, which pushed up free cash margin.

Advanced Micro Devices (AMD), Free Cash Margin, March 2000 – March 2010

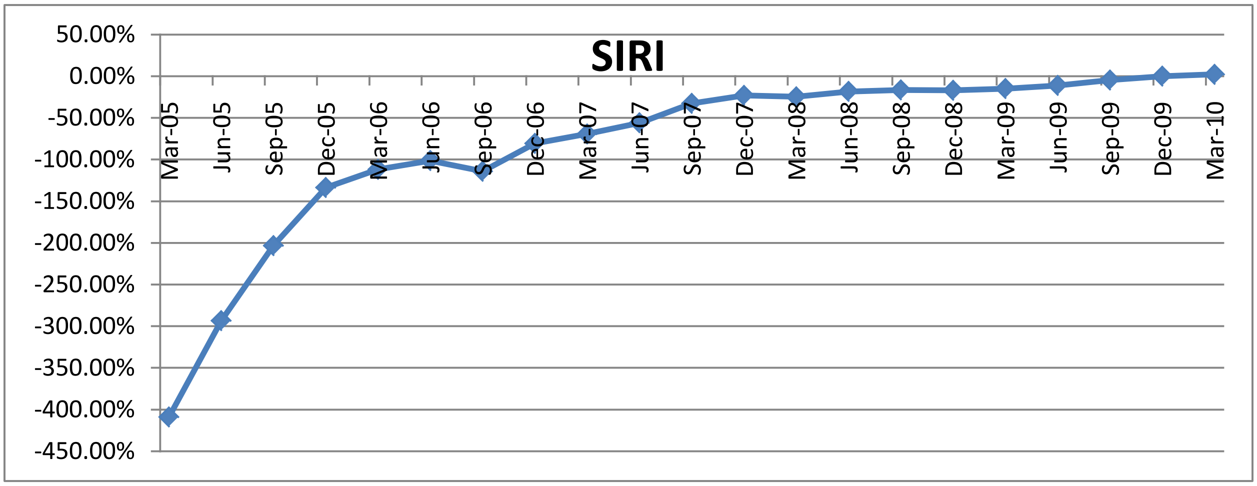


<u>Advanced Micro Devices (AMD)</u>. AMD has shown excellent growth in its free cash margin, which improved from -21.84% for the twelve months ending March 2009 to 7.76% for the twelve months ending March 2010, turning positive for the first time in 3 years. This growth has not been driven by the same decrease in capital expenditures that we have been witnessing the majority of companies (and industries) execute in past quarters. In fact, AMD's capital expenditures as a % of revenue increased from 1.71% in March 2009 to 6.43% in March 2010. In addition to capital expenditures as a % of revenue pushing down free cash margin, the cash cycle increased from 30.27 revenue days for the twelve months ending March 2009 to 40.02 revenue days for March 2010. The main catalyst behind free cash margin improvement has been operating cushion, which improved from 5.51% in March 2009 to 16.0% in March 2010. The improvement in operating cushion is impressive and makes the increase in free cash margin more sustainable.

Stable free cash margin

Free cash margin for the Media industry was stable over the last twelve month period. However, Sirius XM Radio Inc. (SIRI), each exhibited a noticable increase in free cash margin over the prior year.

Sirius XM Radio Inc.(SIRI), Free Cash Margin, March 2005 – March 2010

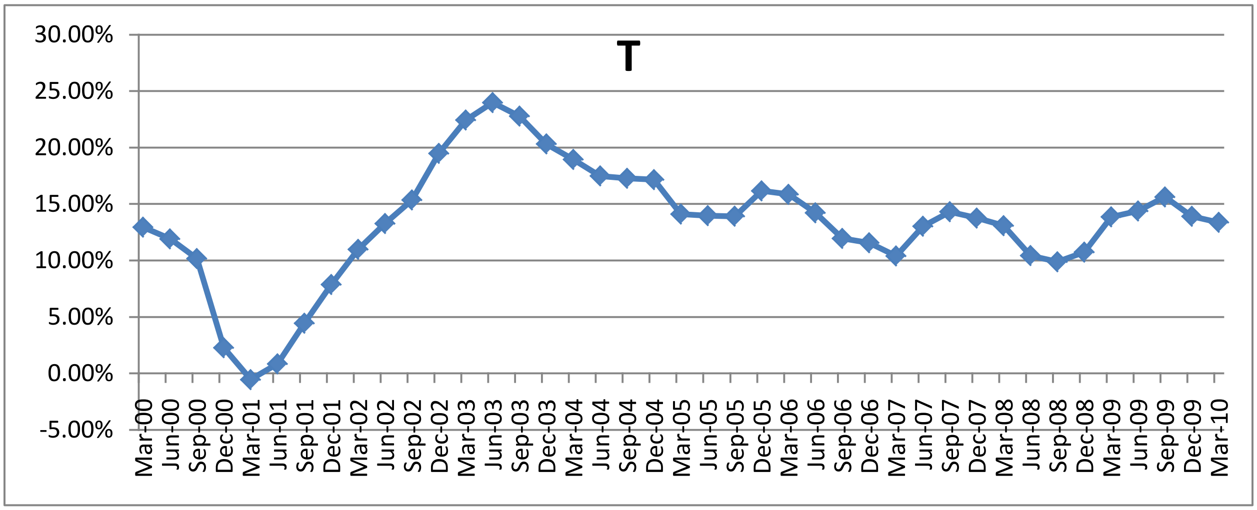


Sirius XM Radio Inc. (SIRI). Sirius XM has had a sustained positive trend in its free cash margin over the last 10 years and finally became positive in March 2010. Free cash margin improved to 2.08% for the twelve months ending March 2010 from -14.9% for the twelve months ending March 2009. As with AMD in the previous example, this increase was fueled by an increase in operating cushion to 28.0% in March 2010 from 10.84% in March 2009. Both capital expenditures as a % of revenue and cash cycle were driving down free cash margin. Capital expenditures as a % of revenue increased from 8.2% in March 2009 to 10.84% in March 2010. Cash cycle increased from -75.61 revenue days in March 2009 to -30.39 revenue days in March 2010, mainly fueled by a significant decrease in payable days. Still, with a negative cash cycle, the company is using prudence in working capital management to maximize cash flow.

Declining free cash margin

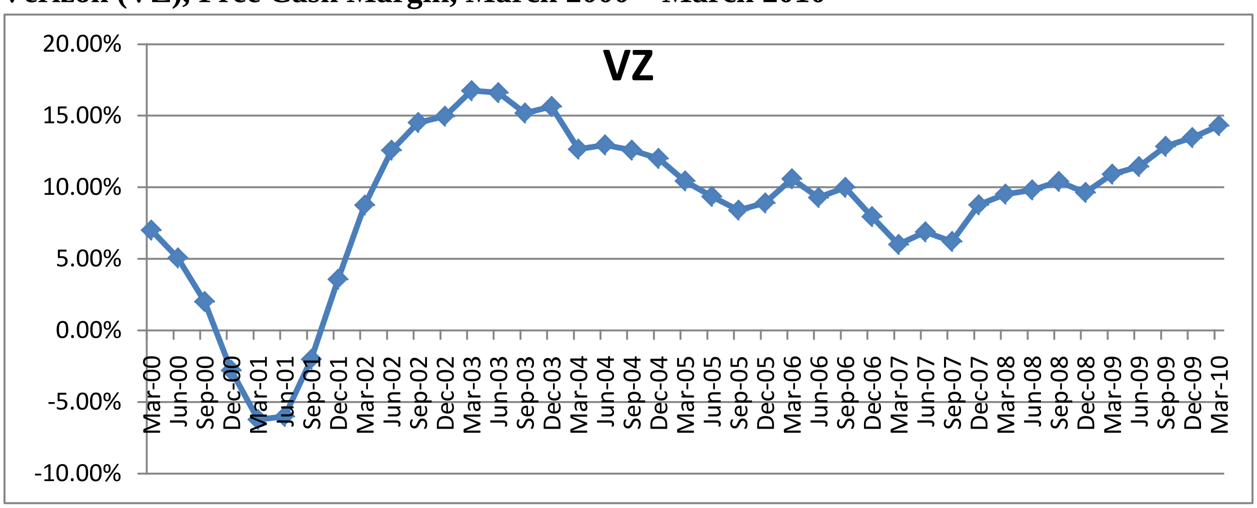
Free cash margin for the Telecommunications industry continued its decline in March 2010 to 9.46% from 10.7% in March 2009 over the last twelve month period. We will examine AT&T (T) and Verizon (VZ) which have free cash margins that appear to be moving in two different directions.

AT&T Inc. (T)., Free Cash Margin, March 2000 – March 2010



AT&T Inc. (T): Free cash margin slightly declined from 13.86% for the twelve months ending March 2009 to 13.38% for the twelve months ending March 2010. Operating cusion slightly declined to 33.91% in March 2010 from 34.6% in March 2009 as revenues remained flat. Capital expenditures as a % of revenues declined from 15.7% in March 2009 to 14.07% in March 2010. The cash cycle improved slightly in March 2010 to -11.62 revenue days from -7.06 revenue days in March 2009.

Verizon (VZ), Free Cash Margin, March 2000 – March 2010



Verizon Inc (V). In contrast to AT&T, free cash margin has increased significantly from 10.91% in March 2009 to 14.30% in March 2010. This has mostly been driven by a decrease in capital expenditures as a % of revenue, which was 16.71% for the twelve months ending March 2009 and 15.53% for the twelve months ending March 2010. The cash cycle decreased from -0.81 revenue days to -5.02 revenue days, which also increased free cash margin. Revenues have been increasing slightly, however operating cushion remained unchanged.

Conclusions

For the twelve months ending with the first quarter of 2010, overall free cash margin for all non-financial firms surveyed continued its climb, reaching a new high point of 6.69%, the highest we have seen the measure since we began tracking it in March 2000. Although the increase in free cash margin has slowed of late, the metric still increased during the latest reporting period. Capital expenditures as a % of revenue remained essentially flat from the fourth quarter of 2009, which was a large driver behind previous increases in free cash margin. An increase in operating cushion, or operating profit before depreciation and amortization pushed free cash margin higher in the first quarter period, driven by an increase in gross margin and a reduction in SG&A as a percent of revenue. This is a testament to managers' ability to control costs. We will continue to monitor the process in future reports to see if companies can maintain the current high level of free cash margin, especially as ramp up capital spending with an improving economy.